

### REMARKS

Reconsideration and allowance of the subject application are respectfully solicited.

Claims 61 through 78 and 116 are pending, with Claims 61 and 116 being independent.

Claim 116 has been added.

Applicant respectfully submits that the subject application's claims have been copied in modified form from Claims 1 through 4 and 6 through 13 of U.S. Patent No. 5,883,732 (Takada, et al.) as shown by the following Table:

TABLE

<b>Takada, et al. claims</b>	<b>subject application claims</b>
1	61
2, 116	62
3/1	63
3/2	73
4/3/1	64
4/3/2	74
5/4/3/1	
5/4/3/2	
6/5/4/3/1	65
6/5/4/3/2	75
7/6/5/4/3/1	66
7/6/5/4/3/2	76
8/6/5/4/3/1	67
8/6/5/4/3/2	77

<b>Takada, et al. claims</b>	<b>subject application claims</b>
9/8/6/5/4/3/1	68
9/8/6/5/4/3/2	78
10	69
11	70
12	71
13	72

Claims 61 through 78 are allowed and the Notice of Allowability states that those claims are patentably distinct from those of U.S. Patent No. 5,883,732 (Takada, et al.). In particular, the Notice of Allowability states that the feature “wherein the curvatures in the main and sub-scanning directions are non-symmetrical with respect to the optical axis” in Takada, et al.’s claims means that **“the curvature in the main scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis, and the curvature in the sub-scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis”**, whereas Claims 61 through 78 instead recite “wherein the curvatures in the main and sub-scanning directions are *rotationally* non-symmetrical with respect to the optical axis”. In support of this statement, the Notice of Allowability cites to a number of patents. Applicant respectfully traverses the foregoing.

As explained in the September 7, 2006 Request for Reconsideration, Applicant respectfully submits that Takada, et al.’s expression “wherein the curvatures in the main and

sub-scanning directions are non-symmetrical with respect to the optical axis” would have been understood by the artisan to refer to the same form of *rotational* asymmetry recited in Claim 61, namely that the curvature in the main scanning direction is not equal to the curvature in the sub-scanning direction.

In support of the foregoing, Applicant submits that the claim language itself (“with respect to the optical axis”) — taken without reference to Takada, et al.’s disclosure — suggests that the aforementioned form of rotational asymmetry is intended. In this regard, Applicant respectfully directs the Examiner to paragraphs 4-10 of Dr. Moore’s 2<sup>nd</sup> Declaration filed July 26, 2005. Applicant respectfully submits that such a Declaration constitutes evidence that should be given weight in construing the Takada, et al. claim language.

Furthermore, Applicant respectfully submits that Takada, et al.’s disclosure should be taken into account when construing its claims, and that such disclosure mandates the conclusion that Takada, et al.’s claimed features pertain to rotational asymmetry. MPEP 2301.03. In particular, Applicant respectfully submits that Takada, et al.’s specification itself suggests that the claim language was intended to refer to rotational asymmetry: it states that “even with lens surfaces that vary continuously in the curvature in the sub-scanning direction, the curvatures in the main and sub-scanning directions will depend on each other if the surfaces are aspheric and symmetric with respect to the optical axis and, therefore, one cannot hold the optical magnification in the sub-scanning direction constant without a sufficient number of the degrees of freedom to achieve simultaneous correction of aberrations in both the main and sub-scanning directions” (col. 5, lines 55-64; emphasis added). Here, Takada, et al. was criticizing surfaces

which are “symmetric with respect to the optical axis”, i.e., where the curvature in the main scanning direction is equal to the curvature in the sub-scanning direction. See 2<sup>nd</sup> Declaration, paragraphs 11-12.

Furthermore, Applicant respectfully submits that Takada, et al.’s prosecution history should be taken into account when construing its claims, and that the position taken in Takada, et al.’s specification is echoed in its prosecution history. The October 5, 1998 Amendment in Takada, et al., a copy of which was attached to the August 18, 2003 Request for Reconsideration in the subject application as Tab 1, stated:

In other words, the aspherical surface [of Yamakawa] is defined only by the distance from the optical axis no matter which direction it is. Accordingly, the aspherical surface thus defined is symmetrical around the optical axis. Namely, in Yamakawa, the curvatures in the main and sub-scanning directions must depend on each other since the curvatures are symmetrical around the optical axis.

In amended claim 1, as discussed above, the curvature in the sub-scanning direction can be determined independently from the curvature in the main scanning direction since the surface is not symmetrical around the optical axis.

Amendment, p. 4, lines 17-27 (double underline emphasis added). Here again, Applicant respectfully submits, “not symmetrical around the optical axis” was being used by Takada, et al. to refer to rotational asymmetry.

And yet again, and most importantly, Applicant also respectfully wishes to point out that

none of Takada, et al.'s embodiments comport with the Official Action's construction ("the curvature in the main scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis, and the curvature in the sub-scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis"). In more detail, in Takada, et al.'s embodiments, the imaging lens has aspheric surfaces in a cross-section taken in the main scanning direction expressed by the  $z_1$  equation below, while the curvature of the imaging lens in the sub-scanning direction varies continuously along the main scanning direction over the effective area of the imaging lens and the curvature is expressed by the  $U_1$  equation below:

$$z_1 = \frac{y^2 / r_0}{1 + \sqrt{1 - (K_1 + 1)(y / r_0)^2}} + A_1 y^4 + B_1 y^6 + C_1 y^8 + D_1 y^{10}$$

$$U_1 = U_{10} + A_{10} y^2 + B_{10} y^4 + C_{10} y^6 + D_{10} y^8 + E_{10} y^{10}$$

(col. 9, lines 18-42). From these equations and the numerical tables in Takada, et al., it can be seen that the imaging lens surfaces are rotationally asymmetric with respect to the optical axis — the radius of curvature in the plane containing the optical axis and the main scanning direction is not equal to the radius of curvature in the plane containing the optical axis and the sub-scanning direction. However, neither the embodiments nor the remainder of Takada, et al. teaches "the curvature in the main scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis, and the curvature in the sub-scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis". See 2<sup>nd</sup> Declaration, paragraphs 13-20.

In view of the foregoing, Applicant respectfully submits that the Takada, et al. Claim 1 recitation should be read to refer to the above-discussed form of rotational asymmetry that is recited in the subject application's Claims 61 et seq., and not to "the curvature in the main scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis, and the curvature in the sub-scanning direction on one side of the optical axis is not the same as that on the other side of the optical axis". And the Takada, et al. Claim 1 recitation having been so construed, Applicant respectfully submits that interfering subject matter exists and declaration of an interference would be appropriate. 37 C.F.R. § 41.203(a).

Separate and individual consideration of each dependent claim is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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